ECONOMICS OF CLOTH PRINTING IN THE DECENTRALISED SECTOR

A Study of Handprinting in Ahmedabad (Gujarat)

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GENERAL CHARACTERISTICS

Ahmedabad has been one of the important centres of hand printing of cloth. It is believed that the indigo dye and the treatment of decorative motifs originated in Gujarat. During the supremacy of the Mughal emperors at Delhi the mosaic or inlay tradition of printing is reported to have enjoyed royal encouragement throughout India and it is believed that the 'chhipa' community at Ahmedabad received considerable stimulus for their printing industry from the Mughals. Another factor responsible for the location of this industry at Ahmedabad is said to be the perennial source of water from Sabarmati river which imparts a tonal quality to the Alizarine dyes for which Ahmedabad has been famous since old days.[1]

Things, however, changed towards the middle of the nineteenth century due to import of machine made Manchester prints. The competition was confined to only the imported cloth. The establishment of a textile factory in Ahmedabad in 1879 threatened further the hand printing industry. Gradually, the units in the organised sector started copying the styles and designs of the handprinted cloth. They were in a position to produce similar prints at cheaper cost, due to the use of mechanical equipment and synthetic dyes.

[1] All India Handicrafts Board, Research Advisory Panel : Report on the Textile Hand Printing Industry at Ahmedabad, 1958, pp. 7-8.

Despite shrinking markets, foreign as well as local, the handprinting industry has survived. Against 125 Karkhanas in 1938 we find 250 Karkhanas existed in 1944 i.e. a rise of 100 per cent in a period of about six years. Besides, there were about 300 cottage units. A survey of the industry conducted by the Research Advisory Panel of the All India Handicrafts Board in 1957 indicated that there were 849 handprinting establishments in Ahmedabad out of which 709 were cottage establishments and 140 Karkhanas employing about 1400 workers on wages. According to the data provided by the Directorate of Factories and Establishments, Government of Gujarat, 228 cloth printing establishments employing 8263 workers were working in Ahmedabad in 1979. These consisted of establishments which were (a) employing more than 10 workers and using power; (b) employing more than 20 workers and were not using power; and, (c) not using power but were notified factories. Besides, about 600 workers were engaged in allied units. The number of cottage units estimated for the same year was about 1000 in which about 2500 household workers were engaged. During 1980 about 350 establishments of cloth printing in the city of Ahmedabad were registered under the Shops and Commercial Establishment Act. The number of cottage units was estimated at about 1000. The total investment in the form of fixed and working capital was estimated at about Rs.50.25 crores. The fixed capital constituted 58.3 per cent and working capital 41.7 per cent of the total investment. The estimated value of annual production of handprinted textiles was Rs.140 crores. The total number of

printers engaged in the industry was estimated at about 16000. Besides printing units, about 15 units were engaged in making screen frames, 60 units in finishing and folding of printed sarees and 10 establishments dealing in colours and chemicals. These ancillary units were employing about 800 workers. A large number of washermen (about 3500) were also associated with this industry. The most significant aspect of the development of the industry was that the size of the workforce in the Karkhanas had increased at a higher rate than the increase in the number of Karkhanas. This indicates that : (a) the Karkhanas were expanding at a faster rate than the household units, and (b) that the household units were not getting enough job work and, therefore, the increase in the number of household units had been marginal over the years and their capacity to pay the workers was also limited as compared to Karkhanas.

Organization

Although both household and non-household establishments carry out handprinting, a majority of the household units use mostly family labour. In the non-household units, defined as those having a majority of hired workers, unpaid family workers look after supervision etc. Thus, in a way, almost all units are run by households; even those using mainly hired labour are owned and operated on a family basis.

The art of dyeing and printing was specialized and developed in Gujerat by 'chhipa' artisans who migrated there from

Rajasthan. In Gujerat 'Bhawsar' are also known as 'chhipa' or 'chhapgar', a term which applies equally to both Hindus and Muslims associated with this industry as printers. Out of the 350 units of Ahmedabad registered under the Shops and Establishment Act in 1980, 300 establishments were owned by the 'chhipa' and the remaining 50 units by the Rajasthani migrant merchants. Most of the Rajasthani merchants were engaged in screen printing of poplin cloth on a large scale. They were printing their own material for sale. The 'chhipas' on the other hand, owned small establishments using both screens and blocks for printing of mostly sarees. They were generally engaged in job work.

The organization of the handprinting industry of the town is divided into three categories as far as its system of production is concerned. The system may be classified as :

1. a. Printing own cloth.
   b. Printing own cloth and undertaking work on contract.
2. a. Undertaking work only on contract.
   b. Undertaking work on contract as well as wages.
3. Undertaking work only on wages.

In our sample of 30 establishments we found that 27 units (90%) were printing textiles for others either on contract or wages while only 3 units (10%) were processing their own raw materials. Four-fifths of the units were partnership while one-fifth were proprietory establishments. The units accepting job work on contract get textiles from the customers and

they use their own dyes and chemicals for printing. Those working on wages generally get all the raw materials from the customers. Both types of establishments also get screens from their customers for printing specific designs of their choice.

Raw Materials

The industry uses raw materials like cloth, dyes, chemicals and kerosene-oil. The most important items of cloth used were mill made cotton voils, poplin, long cloth, powerloom grey cotton and handloom cloth. The textiles are generally procured from the local market. Some of the big cloth merchants also had their own handprinting establishments. The dyes and chemicals are also purchased locally. The textiles, dyes and chemicals are generally purchased on credit and the payments are made within two months, for which no interest is charged. The kerosene is supplied by the dealers on the basis of a fixed quota, sanctioned by the Directorate of Industries, Government of Gujerat. However, in case of short supply of kerosene oil turpentine oil is used.

Marketing

As mentioned earlier, two types of production organizations exist in Ahmedabad, i.e. (a) producing for themselves and (b) producing for others either on contract basis or on wages. The majority of the units consisted of the latter type which do not need any sales depot. They were getting job work mainly from wholesellers/stockists of hand printed textiles. How-

ever, some retailers were also getting their cloth printed through those units. Most of those who were producing textile for sales had their show rooms/sale depots in the factory premises and only a few of them had show rooms at other market places in Ahmedabad.

Those who were printing textiles through their own raw materials were selling their products to whole-sellers/stockists of handprinted textiles. Some of the units were also selling their products to retailers. A substantial number of the larger units had some assured market as they were regularly getting orders for their printed textiles from dealers/whole-sellers and exporters of Ahmedabad and other cities.

Technology

The technologies of both block and screen printing are used in Ahmedabad. However, the traditional method of block printing is being replaced by the faster process of screen printing. It is estimated that against about 56 per cent of production through screen method in 1957, over 75 per cent of textiles were printed through this method in 1981. The shift in favour of screen printing has been largely due to the competition with the organised sector as well as the fact that the larger establishments are engaged in hand printing through screens. A large number of the small block printing units which work either on wages or on contract have switched over to screen printing and the new establishments preferred to opt for screen

rather than block printing as it saves labour cost considerably. The production is faster and the output cost is lower than the block printed textiles.

In screen printing a table of 60' x 5' is used and the printing capacity of a table per day depends on the number of colour shades required in the design. It is, however, estimated that on an average a meter of cloth is printed in one and two colours in about 2.75 and 3.70 minutes respectively.

Labour Recruitment

The smaller establishments are run mostly on the household basis whereas the middle or large size units generally employ printers, mostly on piece rate wages. For other preparatory and finishing processes most of the units give work to outside workers on piece rate. However, some of the middle and large size units employ workers for these jobs also on piece-rate wages. Regular employment is offered only to some office staff like Clerk, Manager or Accountant, etc. The recruitment of printers is done through labour contractors on casual basis, depending upon the quantum of work available in the establishment. Since the recruitment of printers is done through the contractors the skilled labour are being exploited by the contractors. This system has benefited the employers as they do not face any labour shortage, labour unrest or any collective action as there was no Union of printers in the city.

It is estimated that the monthly income of a male printer varies between Rs.300 and Rs.700 and that of a female printer between Rs.225 and Rs.400. The variations in the wage rates are partly due to (a) quantum of work done; (b) slightly higher wages during peak season; and (c) the quality of skill he has and the material he produces.

Problems and Issues

In order to formulate policies and programmes for the development of handprinting industry so as to utilize its employment advantage, a number of issues needed examination. The more important of these issues were :

1. Does the industry have potential for growth ? Whether the entrepreneurs were hopeful of their future in the light of overall conditions of the industry as well as the policies and programmes of the government ?

2. What is the magnitude of the relative employment advantage of the decentralised sector such as the handprinting industry ? How does the efficiency enhancing change in technology affects this advantage ?

3. Given that the handprinting units are more or less household establishments, what is the difference in the distribution of earnings between the household workers and non-household workers ? Whether the quantum of earnings has any relationship with the type of establishment ?

4. Whether there is sufficient skilled labour to fulfil the requirements of the industry ? Whether the employer-employee relations are cordial and workers feel satisfied

with their working conditions ? Whether the industry encourages artisans to become entrepreneurs ?

5. Whether the working conditions are such which help them live in satisfactory conditions ? Whether the industry attract the workers to stay on in this important craft or compel them to move to other occupations or places ?

The Sample

The present study is based on the responses of 30 entrepreneurs and 75 non-household workers. The sample of entrepreneurs was selected from amongst the establishments engaged in screen printing. The workers were selected from a number of their localities. In selecting both the samples of entrepreneurs and workers random selection method was used. The entrepreneurs and workers were interviewed on the basis of two separate interview schedules.

The ownership of 7 units was proprietory and 23 units were running under partnership. The partnership was restricted to the members of the entrepreneurs' family. Thus, in reality all the establishments were family owned. The ownership of 13 units was inherited by their present owners between 1960 and 1978. The remaining 17 units were established by their present owners between 1950 and 1978. Out of them only three units were established by those whose family occupation had been handprinting while 14 units were started by those whose family occupation was other than handprinting. Two significant points emerge from this information. Firstly, none of the new

entrepreneurs belong to the family of printing workers and, therefore, vertical mobility of artisans to the status of owners and entrepreneurs was not found; and secondly, the industry has potential and attraction for entrepreneurs for establishing new units.

Of the 30 units selected for study 10 were registered under Shops and Establishment Act, 5 of them were also registered as Small Scale Industry, 9 were registered under the Factories Act, while 11 units were not registered with any government agency.

The Entrepreneurs

Most of the entrepreneurs (63%) were young i.e., in the age group 21-35 years, followed by about 17 per cent in 36-50 and 20 per cent in 51 years and above age groups. All the entrepreneurs were literate. Most of them had passed high school or higher examinations. About 23 per cent were Graduates, 3 per cent Intermediate and 43 per cent Matriculates. The remaining, i.e. about 30 per cent, were educated either upto junior basic or senior basic level. About two-thirds of the entrepreneurs were Muslims, mostly 'chippa', whose forefathers had migrated to Ahmedabad from Rajasthan. The remaining one-third were Hindus, mostly Bania by caste of which about 30 per cent of the respondents had come from other states.

About half of the entrepreneurs (46.7%) started their career with their present activity; about 37 per cent were

salary/wage earners in other occupations while about 17 per cent were engaged in trading activity. There were three entrepreneurs who had other sources of income also. Two of them had textile shops earning about Rs.1.00 lakh and Rs.0.50 lakh per year each. The third entrepreneur had an ancillary unit for making screen frames. His estimated annual income was Rs.5.0 lakhs from this unit.

Considering the family size norms of the present day we find that the families of the entrepreneurs were of large size. Half of the families had members ranging between six and ten, and one thirds had between 12 and 18 members. Thus, the average size of family was 9.6. About 23 per cent of the family members were working in their own establishments. This suggests that even the non-household units were run on traditional 'family business' lines.

I : HAND PRINTING ESTABLISHMENTS

Capital and Earnings

The average total investment per establishment in fixed capital comes to 225,233.33 (Table 1) and investment obviously increased with the increase in size of establishment as indicated by the number of printing tables. A similar trend has been found in working capital size. Table 1 also presents the indexes of fixed capital and average fixed capital per printing table. It shows a significant rise in the fixed investment with the increase in the size of the establishment. The average

Table 1 : Average Fixed and Working Capital According to the Size of Establishments

Size : No. of printing tables	Fixed Capital						Working capital
	Land and building	Equipment & tools	Other assets	Total	Index of av. fixed capital (establishments)	Index of av. fixed capital per printing table	
3-5	87500	40000	12000	68600	100	100	43000
6-8	128636	79062	25687	181823	265	148	113235
9-12	225000	119600	195000	404600	589	218	354000
13 +	150000	325000	155000	555000	809	129	315000
Nil*	115000	50000	25000	190000	277	-	300000
Total	2305000	2683000	1769000	6757000			4840000
Av. per unit	135588.23	99370.37	63178.57	225233.33			161333.33

* One unit is using hand operated rolling machine for screen printing.

fixed investment per printing table also shows a steady increase. However, the increase is significantly low in proportion to the rise in the index of fixed capital per establishment.

The analysis of annual earnings of establishments of different size indicate a positive relationship between earnings and size of the units. Table 2 points out that the annual earnings of establishments increase more than proportionately with increase in the number of printing tables. However, the average earnings per printing table increase less than proportionately with the number of tables.

Table 2 : Average Earnings of Establishments According to Their Size

Size : No. of printing tables	Average annual earnings	Index of average annual earnings per establishment	Index of average earnings per printing table
3-5	382457.60	100	100
6-8	463235.29	121	68
9-12	1100000.00	288	107
13 +	7950000.00	2079	333

Growth of the Industry

In order to examine growth in size of handprinting establishments, we have analysed information pertaining to possession of equipment, position of employment and production over three periods of time, i.e. 10 years back, 5 years back and last year. The data on production indicates the value of production (the respondents expressed their inability to provide data pertaining to the quantity of production for the first two periods).

The main printing equipments of the selected sample of establishments include printing tables and screen plates. The number of these items indicates the size of the establishment. Table 3 gives an idea of the growth of establishments in terms of the stock of equipment maintained during a period of ten years.

Table 3 : Stock of Equipment Per Establishment

Equipment	Period (Number)		
	10 years back	5 years back	Last year
Printing table	4.69	6.61	8.48
Screen plates	143.00	348.21	607.76

We find that there has been a steady increase in the quantity of the printing equipments of the establishments. However, the period of 'five years back' in the time span considered by us was very significant as far as the development of the enterprises is concerned. The average number of printing tables and screen plates per establishment increased during the period by 41 per cent and 144 per cent respectively. The increase in the stock of screen plates was very significant which possibly points to : (a) the expanding market of handprinted cloth, and, (b) the competition with other units in designs and shades. Such a situation may have led the establishments to keep on changing their design patterns according to consumer taste. This would also help them in competing with units in the organized sector as the new design patterns have greater attraction for dealers of printed cloth. The position of stocks of equipment of different groups of entrepreneurs is presented in Table 4.

Table 4 : Stock of Equipment of Different Types of Establishments (Average per Establishment)

Type of establishment	Printing tables	Screen plates
Work for others	7.31	343.27
Work for themselves	18.67	2866.67
TOTAL	8.48	607.76

It may be seen that the establishments which process only their own raw materials have a significantly larger printing capacity than those who work for others. They own the largest number of printing tables as well as screen plates. The expansion of both types of establishments has been steady during the last ten years. However, the growth of units working for themselves was much faster. During the last ten years, there has been an increase of 166.71 per cent in the average number of printing tables while the stock of screen plates has increased ten-fold in such units. On the other hand, the increase in the stock of printing tables and screen plates of the units who undertake work for others on order was 71.19 per cent and 172.63 per cent respectively during the last ten years.

Growth of the establishments in terms of their size and the printing capacity per shift was further examined for three periods of time during the last ten years. In comparison to the size of the selected units that existed 10 years back we find that about 72 per cent of the units had added more print-

ing tables during the next five years. However, the size of the units last year indicate that only about 17 per cent of the establishments had expanded their size as compared to five years back. Overall the position of the last decade indicates that about 83 per cent of the units had grown in size by adding more printing tables in their establishments.

The addition of more printing tables obviously resulted in increased printing capacity of the establishments. During the last ten years the printing capacity of all the units has improved. Ten years back the printing capacity of about 54 per cent of the units was 500 meters or less per shift. Five years back about 59 per cent of the units were printing over 1000 meters of cloth in one shift. The percentage of such units further increased in the next five years when the per shift printing capacity of about 77 per cent of establishments was recorded as more than 1000 meters of cloth. This included about 47 per cent of units printing more than 2000 meters of cloth per shift as against 28 per cent five years back and 23 per cent of the units 10 years back.

Employment Growth

The total number of workers engaged in the thirty establishments was 984 (including 201 women) workers of which about 80 per cent were printers. This included both household (66) and nonhousehold (918) workers. We have found that employment in this industry in Ahmedabad has increased significantly

during the last ten years. Table 5 shows the average number of workers engaged per establishment 10 years back, 5 years back and last year.

Table 5 : Average Employment Per Establishment During the Last Ten Years

Type of worker	Average employment		
	10 years back	5 years back	Last year
Household	1.54	1.86	2.17
Non-household	9.23	12.28	30.60
Total	10.77	14.14	32.77

We found that the increase in workers, which has been over 200 per cent during these years, was mainly accounted for by the non-household workers. The rise in employment was significantly higher in the last five years than during the earlier five years. The average employment in the latter period recorded an increase of 132 per cent while it was only about 31 per cent during the earlier five years. This trend is in contrast to the growth of stocks of printing equipment and production during the two sub-periods. It, therefore, indicates that the employment in the industry has increased steadily and at a relatively faster pace during the last five years as compared to the earlier five years due to a significant rise in the demand for handprinted cloth.

Production

Handprinting industry at Ahmedabad prints cloth for a variety of purposes, such as cotton and silk sarees, dress material, scarves, quilt covers and chhint for ladies suiting. Only 16 of the sample of 30 units were able to supply us information with regard to the items they produced 10 years back and 29 units provided data of their production relating to the period 5 years back. The data indicate a shift in emphasis on certain items of products over a period of time. For example, out of the sixteen units that supplied us information about their items of production 10 years back, about 69 per cent of the establishments were printing cotton sarees, 13 per cent silk sarees and about 6 per cent quilt-covers, scarves and chhint.

10995

During the next period of five years we find that the emphasis on certain items had declined while some new items like dress materials had been included among the items being printed. Printing of cotton sarees had declined, though only slightly, i.e. by about 3 per cent. Printing of silk sarees declined considerably, i.e. from 13 per cent of the units to about 3 per cent. The percentage of establishments printing quilt covers and chhint also declined to about half while those printing scarves increased from about 6 per cent to 10 per cent. Dress material, which was not mentioned by any of the units in their items of production 10 years back, was taken up during this period by about 21 per cent of the establishments.

During the next five years more units started printing dress materials (30 %) while the percentage of the units printing cotton and silk sarees, quilt-covers and chhint remained almost the same as in the earlier period of 5 years, while the number of establishments printing scarves declined by about 4 per cent. Thus, more and more units started printing dress materials while the percentage of the units printing silk sarees declined considerably. The proportion of the establishments printing cotton sarees remained almost the same during the last 10 years.

On further analysis, however, we found the quantum of printing of cotton sarees had declined over the years considerably. In the selected establishments ten years back 73.4 per cent of the total annual production of printed textiles was in the form of cotton sarees. The proportion declined to 40.6 per cent five years later which was further reduced to 28.2 per cent last year. Similarly printing of silk sarees and scarves also declined considerably. Against 13.3 per cent of total annual printing ten years back, silk sarees were printed only to the extent of 1.7 per cent five years back and 1.2 per cent last year. The quantum of scarves printed ten years back was also 13.3 per cent of the total textiles printed at that time. Their proportion declined to 11.4 per cent five years back and further to 8.8 per cent last year. Such changes in the printing of certain items was only due to introduction of a new item, i.e. dress materials, five years back which account-

ed for 46.3 per cent of the total annual production of that year. Last year, the production of this item further increased to 61.8 per cent. Thus, dress materials became the major item of hand printing in the selected establishments.

The printing of dress materials was taken up by the larger establishments while the comparatively smaller units engaged in printing cotton sarees. This is possibly due to the fact that for printing of dress materials a larger amount of working capital is required as the textiles used in printing of this item are costlier than those used in printing of cotton sarees. The increasing concentration on dress materials also indicates that there was a promising demand for handprinted dress materials in the market, particularly, in the foreign market.

One significant point we found was that the quantity of production of hand printed textiles had increased significantly during the last ten years. However, the increase was higher during the first period of five years as compared to the later period of five years. The rise in per establishment production of hand printed textiles last year was 829.7 per cent higher as compared to ten years back, but the increase in average output per unit last year was only 146.7 per cent as compared to an increase of 276.8 per cent during the previous period of five years. An explanation to this phenomenon given by the respondents was that in the later period the capacity of the units was not utilized to its maximum.

An analysis of the sales of the textiles printed in the establishments shows a consistent increase during the three periods of time, i.e. 10 years back, 5 years back and last year. However, the rate of increase has been different in different periods and has also variations in different types of establishments. Table 6 presents these variations.

Table 6 : Growth of Sales of Different Types of Establishments During the Last Ten Years

(Rs.)

Period	Types of Establishments	
	Work for themselves (Average sales per unit)	Work for others (Average sale per unit)
10 years back	200000	110000
5 years back	1800000	352692
Last year	5866667	547677

The data indicates that there was a significant rise in the output of both types of establishments. However, the rise in the output of the units in the category of 'work for themselves' was tremendous as compared to those who 'work for others'. Comparing the annual sales 10 years back we find the sales of those who work for themselves had increased by 2833.33 per cent last year. Against this the rise recorded in the case of those who work for others was only 397.89 per cent during the same period. The rise in production of hand printed textiles in the units who work for themselves in the period of 5 years back against the quantum of production 10 years back was 800

per cent and against the production of 5 years back the output of these establishments had increased by 225.93 per cent last year. In comparison, the production of the units working for others had increased by 220.63 per cent during the period of 5 years back against the figures of production 10 years back. The rise in the output last year against the production of 5 years back was only 55.29 per cent.

The data suggest that the units engaged in printing of textiles with their own cloth were the larger ones. They were expanding at a much faster rate than those engaged in printing of textiles for others. The growth of the latter type units was slower as they had to depend on work from dealers/whole-sellers and other handprinting units who give them job work when they have to fulfil their commitments in the market in short span of time.

Future Prospects

Most of the respondents (93.3 %) expressed their satisfaction over the progress in their business. Almost all of them were hopeful of the future of the industry. Four major reasons were listed by them for their hopefulness : availability of skilled labour, good market for their products, availability of raw materials and finances. Some of them also cited past performance of the establishments in expressing their hope for the future. It is worth-mentioning that the size of the units, in terms of possession of printing tables, of a large majority

of the selected establishments had increased considerably. For example, 10 years back 61.5 per cent of the establishments had upto five printing tables while the percentage of such units had come down to 17.2 last year. Those possessing between 6 and 8 tables were 30.8 per cent 10 years back and their proportion had increased to 58.6 last year. Only 7.7 per cent of the units had between 9 and 12 printing tables 10 years back whereas the percentage of units having similar number of tables had increased to 17.2 last year and, at the same time, about 7 per cent of the units had acquired more than 12 printing tables. This indicates that hand printing establishments had grown in sizes, to a significant extent, during the last decade.

The two respondents who were rather dissatisfied with the progress of their establishments listed a few reasons for slack in business. Among them tough competition with other similar units resulting in non-availability of sufficient job work was the main reason. Other reasons included shortage of working capital and water which were affecting expansion of their units.

Most of the respondents (93.3 %) were keen on increasing the scope of their business. However, almost all of them (96.4 %) felt they would be facing some problems in expansion such as difficulty in getting finances and raw materials, competition in the market, space for work and harassment from the Municipal authorities. Most of them had, however, initiated

some steps to solve their problems, particularly of finances, work space and the market. The finances were being arranged through institutional as well as private sources for meeting requirements of working and fixed capital. Markets outside Ahmedabad were being explored and job work from small traders was accepted. During periods of shortage of some raw materials alternative materials were used.

Finally, the respondents were asked whether they would like to offer suggestions as to how the industry can be developed at a faster pace. A number of them offered suggestions relating to : (a) protection of interests of the industry; (b) economising production; and, (c) increasing the earnings of workers. Regarding protection of interests of the industry, it was suggested that government should take greater interest in the industry by : (a) establishing an industrial estate where shed/building is provided on easy instalments; (b) providing loans on easy terms and subsidy to smaller units for expanding their printing capacity, and (c) making available raw materials at controlled prices.

Regarding economising production they suggested establishment of a research organisation and a common facility centre. They felt the need for research and training in new techniques of handprinting which would help produce better quality multi-colour prints in the shortest possible time. About the common facility centre they thought the facilities of steaming and calendaring will be available to smaller units at considerably low rates.

As regards improvement in the earnings of printers the respondents suggested that : (a) the printers should be given training in speedy and quality printing in multi-colours. This training can be organised through some government organization, such as the research and common facility centre; (b) a larger number of workers should be provided regular jobs. This can be made possible only if the majority of the smaller establishments engaged in job work are helped by financial institutions and the Export Promotion Council, and, (c) the practice of recuitment of labour through middlemen will have to be discontinued.

Markets and Marketing Systems

We found that most of the establishments (27 out of 30) were undertaking job work. The practice of providing services to other units was, however, not confined to small units only. In fact, most of the units of all sizes were engaged in printing textiles for others.

None of the selected establishments was directly exporting its products to foreign markets. All the three units engaged in printing textiles entirely through their own materials were selling their products mainly to wholesellers/dealers of handprinted textiles. However, two of these establishments were also selling some of their materials directly to retailers but the proportion of their sales to this group of buyers was insignificant. Similarly, three fourths of the units undertaking job work were getting work from wholesellers/dealers to the

extent of 76 to 100 per cent of their total printing work. Another two units were also doing work for these dealers to the extent of 50 per cent of their production. About 30 per cent of the units were undertaking job work from retailers while one unit was totally engaged in printing textiles for a mill in the organized sector.

In response to a question relating to the print designs the majority of entrepreneurs (86.7 %) informed that they were using print designs supplied by their customers while 13.3 per cent of the units reported that they were copying their existing designs. However, they also print exclusive designs supplied by their customers.

None of the selected units reported having its show-room outside Ahmedabad. Only one entrepreneur had his show room outside his hand printing establishment. Thus, the customers, i.e. wholesellers/dealers and retailers, from different places have to go to the handprinting establishments to procure their requirements.

Competition

Except one, all the respondents reported a tough competition in the trade. They also indicated the extent of their competition with different types of enterprises. The ranks assigned to the four types of printing establishments indicating their importance in the competition are presented in Table 7.

Table 7 : Ranking of Competitors

Competitors	Ranks I	II	III
1. Smaller than own	3 (10.34)	4 (19.05)	11 (57.89)
2. Similar to own	8 (27.59)	14 (66.67)	2 (10.53)
3. Larger than own	18 (62.07)	2 (9.52)	6 (31.58)
4. Modern Enterprises	-	1 (4.76)	-
TOTAL	29 (100.00)	21 (72.41)	19 (65.52)

Figures in brackets represent percentages.

As is seen about 65 per cent of the entrepreneurs reported their competition with three types of establishments whereas about 72 per cent of the establishments were facing competition from two types of units. A large majority of the respondents reported competition of varying intensity with units larger than their own (89.66%) and units similar to their own (82.76%). About 62 per cent placed units smaller than their own in different ranks. The modern enterprises in the organized sector occupied an insignificant position among the competitors of hand printing industry of Ahmedabad. Thus, the competition was confined among the local handprinting units. The respondents were facing competition primarily with establishments of larger size than their own followed by the units of similar size.

The smallest handprinting establishments, i.e. with 3 to 5 printing tables felt threatened by the units larger than their own (80.0 %). Most of the respondents having medium and large size establishments felt their main competitors were the small size units or to some extent units similar in size. The establishments of different size groups have reasons to feel threatened from each other. Since most of the units were undertaking job work the larger units were getting work from big dealers of hand printed textiles while the smaller units were getting work from small wholesellers and retailers. The large size units were in a position to undertake job work at a cheaper rate but their colour combinations and designs were generally limited while the smaller units because of their larger number had more variety in colour combinations and designs. Unlike the larger units the smaller ones were catering to the demands of small wholesellers and retailers with the result that these customers, i.e. small wholesellers and retailers, had a bigger margin of profit as compared to those buying textiles from wholesellers/dealers. Thus, the markets of the larger and smaller handprinting establishments were different but their effect on each other in the competition was significant.

Employment Structure

The thirty handprinting establishments covered under the survey employed a total number of 984 full-time workers. Among them 918 were hired and 66 were unpaid family workers (Table 8).

Table 8 : Workers Engaged in Establishments

Process	Hired Labour			Unpaid Family Labour			Total		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
A. ADMINISTRATIVE									
Manager	8	-	8	40	-	40	48	-	48
Clerks	39	-	39	10	2	12	49	2	51
Ministerial	4	-	4	14	-	14	18	-	18
B. WORKERS									
Washing	8	4	12	-	-	-	8	4	12
Printing	596	190	786	-	-	-	596	190	786
Steaming	4	-	4	-	-	-	4	-	4
Curing	31	5	36	-	-	-	31	5	36
Pressing	4	-	4	-	-	-	4	-	4
Packing	15	-	15	-	-	-	15	-	15
Others	10	-	10	-	-	-	10	-	10
TOTAL	719	199	918	64	2	66	783	201	984

About one-fifths (20.43%) of the workers were women, 2 of them unpaid family workers. About 12 per cent of the workers were reported to be in administrative categories of whom about 41 per cent (48) were classified as Managers. Among them 40 persons were from the families of owners. The number of Managers exceeds the number of selected units as some of the large size establishments employ more than one Manager. The job of a Manager in most of the handprinting units carries a number of responsibilities such as supervision of various functions, procurement of raw materials, marketing, maintenance of accounts, cutting of the printed cloth in required sizes, packing of the

finished products, etc. The rest of the workers engaged in the 'non-production' jobs consisted of clerical and ministerial staff. Most of the clerks were paid employees but a majority of the workers engaged in ministerial category were unpaid family workers. Only 2 out of 117 workers in the administrative category were women, both being unpaid family workers in the clerk's category.

Out of 867 workers engaged in different production processes 90.66 per cent were printers. Thus about 9 per cent of workers were engaged in allied processes on a regular basis. Their number was small because such type of work was generally given to outside workers on piece rate. This arrangement is considered cheap as well as convenient. Workforce in the production processes consisted of only hired labour. About one-fifth of the total workers were women; mostly printers. They constituted of 24.17 per cent of total printers.

Labour Cost and Wage Rates

The share of printers in the production cost has been calculated on the basis of average cost of printing of a unit of different items. The cost shown in the column under labour cost (Table 9) refers to the average of the charges paid to printers for printing the item in single/multiple colour shades, whereas other processes include labour charges paid to other workers for preparatory and finishing jobs.

Table 9 : Average Cost of Production of a Unit (Rs.)

Item	Dyes and chemicals	Other processing	Labour	Other cost	Total
Saree cotton	1.65	0.72	0.90	0.85	4.12
Bed cover	2.20	0.55	2.08	0.70	5.53
Scarf	1.60	0.45	0.96	0.50	3.46
Dress material (per meter)	1.35	0.40	1.80	0.60	4.15

The cost of the cloth in the above table has been excluded as it is not a standardised item and the value of this material varies according to its quality. The variations in the cost of labour are mainly due to the quality of the product and the number of colours used in printing the item. The share of printers in the cost of production of different items also indicates the labour intensive nature of the industry. The lowest share of workers has been found in the cost of production of a cotton saree (21.85%) while their share is significantly higher in fancy items such as dress material (43.37%), bed-covers (37.61%) and scarves (27.75%) (The share of household workers in the earnings of their establishments, on the other hand, range between 48.5 per cent and 54.4 per cent, depending upon the quality of textiles printed).

The wages of male and female printers vary significantly i.e. women printers were getting lower wages than men. According to our respondents, wages of male printers range from Rs.9

to Rs.25 per day while that of female printers range between Rs.7 and Rs.15 per day. The range indicates that the wages were paid to printers on the basis of their level of skills.

The entrepreneurs estimated that on an average about 41 per cent of their printers earn a monthly wage of below Rs.300, about 32 per cent earn above Rs.400 and about 27 per cent between Rs.300 and Rs.400. On further analysis we find a significant difference in the proportion of male and female printers earning the lowest and the highest wages. For example, 47.68 per cent of the female printers earn a monthly wage of below Rs.300 while the percentage of male workers earning similar wages was 38.90. About one-third of the male printers (33.87%) were able to earn above Rs.400 per month as against 24.50 per cent of the female printers. In the middle wage-group, however, the proportion of male and female workers was almost similar, i.e. 27.82 per cent of the female and 27.23 per cent of the male printers were earning between Rs.300 and Rs.400 per month.

Labour Supply

The peak season and its duration in this centre vary from one establishment to another. However, for most of the units the peak seasons are summer and winter, though at least one-fifth of the respondents reported that they were doing more work during rainy seasons. The duration of the peak season for different selected units varies considerably, ranging from 2 months to 9 months in a year : 60 per cent of the establishments reported a peak season of 4-5 months, 20 per cent of 6-7

months and 10 per cent of 2-3 months and 8-9 months each in a year. About 60 per cent of the respondents reported that their requirements of labour in the peak season increase significantly and they meet it by hiring more non-household labour (55.56%), using unutilised family labour/shifting household workers engaged in supervisory work to printing (50.00) and or by contracting out the printing work to other establishments (11.11%). During these periods most of the establishments (86.67%) get additional non-household workers without any difficulty but a large proportion of them (61.12%) have to pay higher ranging from Re.0.50 to Rs.3 per day (55.56%) and Rs.4 to Rs.5 per day (5.56%).

Labour turn-over has not been reported as a serious problem but the problem of absenteeism was found in about one-third of the selected units. The major reason for absenteeism given by the respondents was that the workers take leave to work in other units on higher wages. To avoid such a situation most of the units (73.33%) offer some incentives to printers. The incentives include bonus/festival bonus, loans and advances.

II : EMPLOYMENT, EARNINGS AND LIVING CONDITIONS OF WORKERS

In the earlier pages, some aspects of employment, wages, earnings etc. of hand printing workers were described on the basis of information received from employers. An attempt has been made to portray the working and living conditions of workers in the following pages. The information was collected from seventy-five workers through a separate interview schedule.

The purpose was to find out the background of these workers, the employment position in the industry, service conditions, employer-employee relations and conditions of living.

Some General Characteristics

Most of the workers were young as around three-fourths of them were in the age group of upto 30 years (about half of them were less than 20 years in age). The remaining one-fourths of the workers were, therefore, in the age group of 31 years or more. About 45 per cent of the workers were illiterate, 31 per cent had studied upto the primary and about 23 per cent up to the middle levels. Only one worker was a graduate. The majority of the workers were Hindus (57.34%) and among them 95 per cent belonged to scheduled castes and backward castes. The remaining workers (42.67%) were Muslims. The young age of workers is reflected in the duration of their association with the handprinting industry as 44 per cent of them had been associated with the industry for five years or less, 36 per cent had been with this industry for a period ranging from 6 to 10 years and 20 per cent for a period from 11 to 20 years. A large majority of workers (93.3%) were employed in Karkhana type non-household establishments as casual workers (81.3%). Most of the respondents were engaged on piece rate wages (70.67%). The handprinting job had been carried out on a hereditary basis by about 83 per cent of workers and only about 11 per cent of workers had done some other job earlier and had now shifted to handprinting work. Half of them were doing some petty trade and

the other half were in service. Most of them (75.00%) had put in considerable time (over 10 years) in their earlier occupations. The reasons given by them for leaving their earlier occupation included inadequate/uncertain income, insecurity of job or irregular work and 'lost interest'.

As regards the average monthly income of workers in a year from handprinting work we find that about half (50.70%) of them were earning between Rs.201-300. About 32 per cent of workers were getting between Rs.100 and Rs.200 p.m. and 17 per cent were earning between Rs.301-400. Some of the workers, particularly women workers (7.00%) were engaged in this industry on part-time basis, working for about 4 hours a day and, therefore, their earnings were obviously the lowest, i.e. around Rs.100 p.m. Thus, the average monthly wages per worker comes to Rs.257.20.

Employment and Unemployment

The insecurity in earnings due to irregular employment throughout the year is the foremost problem that the workers face in this industry. As the demand for workers varies from season to season it is not certain that every regular worker of an establishment will get work every day of the year. Considering this we asked the workers to estimate the number of days they get employment in a month during different seasons. The responses are presented in Table 10.

Table 10 : Days of Employment in a Month During Different Seasons

Season	Days of employment in a month				
	Upto 15	16-21	22-27	28 +	Total
Summer	-	-	69 (92.00)	6 (8.00)	75 (100.00)
Rainy	28 (68.29)	10 (24.39)	3 (7.32)	-	41 (100.00)
Winter	-	1 (1.33)	70 (93.34)	4 (5.33)	75 (100.00)

Figures in brackets represent percentages.

We find the employment situation was worst during rainy season. A large number of workers (45.3 %) were not able to get work of any duration in this season. Among those who could get work the majority (68.3 %) were able to get work only for a period of upto 15 days a month. Another about one-fourths were getting work for a period of upto three weeks a month. Thus, only about 7 per cent of the workers were getting employment for the whole month. However, all the workers who get employment on any day during rainy season get work for the full day of eight hours while some women workers reported they were getting work only for a few hours a day during summer (5.24%) and winter (8.0%) seasons. On further investigation, however, it was found that some women workers were engaged on part time basis during the busy seasons.

Earnings

Since the workers were facing serious problems in getting work during the rainy season the regular earnings of workers throughout the year remained uncertain. Though we did not find any evidence of workers getting lower rates of wages during this season, yet their earnings remained quite low as compared to summer and winter seasons. The reasons were: (a) the majority of workers get work for fewer days per month, and (b) because of shortage of work they could neither earn additional wages for overtime work nor get peak period incentive wages.

The average earnings per month during summer and winter seasons were almost uniform but the earnings declined significantly during rainy season. For example, on an average about one per cent of workers were getting wages upto Rs.100 p.m. during summer and winter seasons while those earnings similar wages during rainy season constituted about 22 per cent of the selected respondents. About 63 per cent of the workers were able to earn between Rs.101-200 per month during the rainy season while those getting similar wages during other seasons constituted only 20 per cent of the workers. About 79 per cent of workers were earning wages of more than Rs.200 per month during the peak seasons of summer and winter. In comparison only about 15 per cent of workers earned similar wages during the lean months of rainy season.

Table 11 : Monthly Wages of Workers During Different Seasons

Season	Monthly earnings (Rs.)					
	Upto 100	101-200	201-300	301-400	401 and above	Total
Summer	1 (1.33)	15 (20.00)	37 (49.34)	18 (24.00)	4 (5.33)	75 (100.00)
Rainy	9 (21.95)	26 (63.41)	4 (9.76)	2 (4.88)	-	41* (100.00)
Winter	1 (1.33)	15 (20.00)	36 (48.00)	19 (25.34)	4 (5.33)	75 (100.00)

*34 respondents reported unemployment during rainy season.

Figures in brackets represent percentages.

The average monthly earnings of a worker during a year comes to Rs.257.20. But the wages varied from season to season widely. Average monthly wages of workers during the rainy season were lowest (Rs.185.12) and were around 67.40 per cent of what they earned during the summer and 65.51 per cent of what they earned during winter. The average monthly wages of workers engaged in small household units were much lower than of those working in karkhanas. The average monthly earnings of workers engaged in small household units were 84.68 per cent, 55.55 per cent and 82.34 per cent of what the workers in Karkhanas were getting during summer, rainy and winter seasons respectively (Table 12).

Table 12 : Average Wages of Workers During Different Seasons

Type of establishment	Seasons		
	Summer	Rainy	Winter
Karkhana	277.50	193.51	285.37
Small household unit	235.00	107.50	235.00
TOTAL	274.67	185.12	282.60

To increase earnings most of the workers work over-time and about 16 per cent of the respondents also had some other sources of income. They try to improve their low earnings from their main occupation of handprinting by taking up part-time work at other places. Most of them were working for a few hours a day either in transport or as labour in shops while some had their own petty business.

An overwhelming majority of respondents (93.33%) reported that their monthly earnings from handprinting had increased during the last five years. The average monthly earnings of those who reported improvement in their wages (including overtime wages) were Rs.156.35, Rs.204.02 and Rs.257.20 five years before, three years before and at the time of investigation respectively. Thus, as compared to five years earlier the average monthly earnings of workers had increased by 30.49 per cent two years later and by 64.29 per cent at the time of the study. On an average, the increase in earnings of workers during the last five years has, thus, been at the rate of about 12.86 per cent per year.

A large majority of the respondents (84%) expressed their intention to continue in their present occupation of handprinting despite the fact that about 51 per cent of the workers felt there were no opportunities for advancement in the present job. However, all the respondents were hopeful that with their training in handprinting they will get a similar job elsewhere easily, if they desire to leave their present employer.

Employer-Employee Relations

It was found that the employer-employee relations were generally satisfactory as an overwhelming majority of the workers (97.3 %) termed their relationship with their masters as 'harmonious'. However, on a specific question relating to the employers' attitude towards the needs of their workers a majority of the respondents felt that their employers have an indifferent attitude towards leave, advances/loans, fringe benefits and medical care. Their responses are presented in Table 13.

Table 13 : Employers' Attitude Towards the Needs of Their Workers

Need of Workers	Employers' Attitude				
	Can't say/ no experience	Sympathetic	Indifferent	Unsympathetic	Total (Col. 3-5)
1	2	3	4	5	6
Leave	23	6 (11.54)	37 (71.15)	9 (17.31)	52 (100.00)
Advances/Loans	17	22 (37.93)	34 (58.62)	2 (3.45)	58 (100.00)
Fringe benefits	25	12 (24.00)	28 (56.00)	10 (20.00)	50 (100.00)
Medical care	2	-	38 (52.05)	35 (47.95)	73 (100.00)
Timely payment	2	72 (98.63)	-	1 (1.37)	73 (100.00)

Figures in brackets represent percentages.

As is evident, a sizeable number of workers had no opinion on the attitude of their employers towards some of the needs of the workers. Almost all of those who were able to identify their employers' attitude termed it sympathetic with regard to timely payment of wages. About 38 per cent of the respondents considered their employers had similar attitude towards advances/loans required by the workers. Only about one-fourths of those who could identify the attitudes of their employers towards fringe benefits thought their masters were 'sympathetic'. However, information pertaining to another question reveals that 45.33 per cent of the respondents had been getting some amount of money from their employers on the occasion of Diwali/Id festivals. The amount was termed by the respondents as bonus which varied from Rs.11 to Rs.151.

Conditions of Living

About two-thirds of the families of selected respondents consisted of 4-6 members and one-fifth had small families of upto a maximum of three members. Thus, only about 13 per cent of the families had seven or more members.

The monthly household expenditure of nearly half of the workers on food, clothing, children's education, durable goods, ceremonies, transport and personal services was over Rs.500 and that of about 23 per cent between Rs.401-500. Thus, the monthly household expenditure of 72 per cent of workers was more than Rs.400. A majority of the small sized families (66.67%) spent upto Rs.300 p.m., while 58 per cent of the medium and 70

per cent of the large sized families spent over Rs.500 per month. Though the monthly household expenditure of 70 per cent of the large and 58 per cent of the medium sized families was over Rs.500, the proportion of the medium sized families among those spending over Rs.400 was higher (86%) than the large sized families (80%).

Table 14 : Size of Family and Monthly Household Expenditure

Family Members	Monthly Expenditure (Rs.)				
	Upto 300	301-400	401-500	500 +	Total
Upto 3	10 (66.67)	2 (13.33)	2 (13.33)	1 (6.67)	15 (20.00)
4-6	4 (8.00)	3 (6.00)	14 (28.00)	29 (58.00)	50 (66.67)
7 +	-	2 (20.00)	1 (10.00)	7 (70.00)	10 (13.33)
TOTAL	14 (18.67)	7 (9.33)	17 (22.67)	37 (49.33)	75 (100.00)

Figures in brackets represent percentages.

Table 14 indicates only the aggregate position with regard to consumption. In an attempt to determine the socio-economic status of this population we present figures of per capita monthly expenditure on consumption items in Table 15.

Table 15 : Per Capita Monthly Household Expenditure

Family Members	Per Capita Expenditure
Upto 3	138.18
4-6	105.02
7 +	86.85
TOTAL	103.35

Before we analyse Table 15 we would like to clarify that the per capita household expenditure takes into account for only those family members who live with the worker. The dependents, thus, living outside have been excluded even if their financial needs are fulfilled by the respondents. Some of the respondents (10) were staying in Ahmedabad separately and their dependents were living at their native places. Such workers have been included in the family size groups of 'upto 3 members'.

The per capita monthly expenditure of the total sample on consumption items comes to Rs.103.35. It has been found negatively related to the size of family, i.e. the smallest families were able to spend highest amount on consumption items per head and the largest families had the lowest per capita expenditure. On updating the Planning Commission's criterion for determining the poverty line i.e. a per capita expenditure of upto Rs.62.0 on private consumption during 1973-74, we find that all the ten families of seven or more members were living below the poverty line.

The monthly expenditure of workers on certain non-food items and entertainment was also recorded. Only four per cent of the respondents did not spend any amount on such items. The highest average monthly expenditure was recorded in the case of 4 per cent of workers consuming alcohol (Rs.86.67). Over three-fourths of the respondents (78.67%) spent on an average Rs.22.20 on films/entertainment; 32 per cent an average of Rs.26.13 on smoking; and, 18.67 per cent of workers an average of Rs.22 on pan-tobacco.

About 88 per cent of the respondents reported some expenditure on medical treatment of self or their family members. The average expenditure comes to Rs.216.44 per year - about 53 per cent of them spending between Rs.201 and Rs.450. Considering the economic status of these workers the amount spent on medical treatment was quite substantial and, therefore, there was a need for some scheme of medical and health assistance for handprinting workers.

Indebtedness

Nearly two-thirds of the respondents (64%) had incurred debts, mostly for meeting consumption and social needs. A total of 48 respondents had taken loans for different purposes : marriage in the family and other ceremonies (25), household expenditure (9), housing (8) and medical treatment (6). The main source through which they secured loans was 'relatives' (26) followed by moneylenders (9), 'friends' (6), 'others' (6) and bank (1).

About 90 per cent of the indebted persons had secured loans of over Rs.600 while about 4 per cent each had obtained upto Rs.200 and between Rs.201-400 and the remaining 2 per cent of the indebted workers had secured between Rs.401-600. The rate of interest on loans varied from 5 per cent to 36 per cent per year. The highest rate of interest was charged by the moneylenders.

The period of indebtedness of about 46 per cent of workers was upto two years. About 27 per cent of the workers were indebted for a period ranging between two and four years and a similar percentage for over four years. Such a situation points to the poor economic conditions of workers as those of the indebted respondents who had borrowed money were paying interest on borrowings for quite a long period but were unable to repay the amount of loan in a short period.

Housing

Only 10 (13.3 %) workers of the sample were living in their own houses. Among them 6 had ancestral houses while 4 had purchased/constructed their present houses themselves. Thus 65 (86.67%) respondents were living in rented accommodation. The amount of monthly rent of these houses itself indicates that the type of accommodation that the workers possessed was in no way satisfactory. About 77 per cent of them were paying upto Rs.20, 15 per cent between Rs.21-30 and about 8 per cent over Rs.30 per month.

About 70 per cent of workers were living in either fully kutcha or partly kutcha and partly pucca houses. As far as the accommodation was concerned 80 per cent were living in a single room and 20 per cent had two rooms. Over half (54.8 %) of the houses did not have electricity. A similar proportion of the houses also had no running water, 85 per cent had no independent toilet and 21.3 per cent had no separate bathroom facilities.

Conclusion

Despite a severe set back due to import of machine-printed Manchester textiles towards the middle of the nineteenth century and the establishment of factories from the late 1870s the handprinting industry in the decentralised sector at Ahmedabad has survived. Against about 550 units, including 300 cottage units, in 1944 we find there were 849 establishments, including 709 cottage units, in 1957. In 1979 the number of *karkhanas* was 228 and that of cottage units about 1000 with which about twenty-one thousand workers were associated. The data for this centre was collected between February and December 1981. It indicates the industry has a good potential for growth and generation of employment.

In our sample of 30 establishments seventeen were established by their present owners; 14 of them by those whose family occupation had been other than handprinting. The handprinting units of Ahmedabad do not feel threatened by competition from the organised sector. They expressed satisfaction at the favourable market conditions for handprinted cloth. They were also hopeful of the future of this industry.

The data indicate that the annual earnings of establishments increase more than proportionately with increase in the number of printing tables. The units engaged in job work earned a relatively low income as compared to large size *karkhana* type establishments which have control over the final output. Objectively, support to small household units seems very much required. Such establishments need : facilities of an industrial

estate for handprinting units where work sheds are provided at concessional rates; financial assistance at concessional rates of interest for printing own textiles; raw materials at reasonable rates and in sufficient quantity; and, support in marketing their products through departmental stores, cooperatives and Export Promotion Council. In order to improve the earnings of handprinting workers the respondents also suggested abolition of the system of recruitment through labour contractors or middleman. For this the help of the government was needed.

The average employment per unit recorded an increase of about 132 per cent during the last five years whereas the rise in employment in the previous five years' period was 31 per cent. This suggests that the industry was expanding at a relatively faster pace now than earlier. The relative employment advantage of the handprinting industry is that it is labour intensive. Besides hired workers, a number of the household workers also work in their family enterprise. However, our estimate of the earnings of nonhousehold workers is much lower than the average annual earnings of household workers. This indicates that the handprinting units in Ahmedabad have the characteristics of a traditional family business in which the wages of the employees are generally very low.

The low wages of workers are due to a number of factors, mainly, (a) the size of workforce available in the market, (b) the bargaining capacity of workers, (c) the opportunities for alternative employment. We find that due to availability of a larger number of workers than required, the workers have to face

intermittent unemployment because of non-availability of work in the market. While suggesting measures for improving conditions of printing workers about 31 per cent of the selected workers expressed their concern over non-availability of work throughout the year. There is also hardly any scope for alternative employment in the area. There is no trade union of printers and the labour is recruited through contractors, with the result the workers have no bargaining power. About 40 per cent of the respondents expressed the need for enforcing labour laws including fixation of minimum wages for handprinting workers.

Although a large majority of workers (97.33%) termed their relations with their employers as 'harmonious' yet on further probing they were found to be satisfied only with their employers' attitude with regard to timely payment of wages. About 38 per cent, 24 per cent and 12 per cent of workers felt the attitude of their employers towards them in granting loans and advances, certain fringe benefits and leave respectively was sympathetic. The finge benefits in these cases include bonus paid at the time of Diwali/Id. Thus, we find that there was no provision of fringe benefits like medical care or paid medical leave for the workers. This is because the workers are not permanent employees of the handprinting establishments. However, provision of medical care is very much required for the handprinting workers.

We find that the working and living conditions of workers are not at all satisfactory. A majority of the workers (64.0 %) were indebted. The period of indebtedness of about 27 per cent of them was as long as five years or more and most of them were

paying a high rate of interest. This situation indicates the weak economic conditions of workers who could not repay the amount of loan in a short period. The living conditions as indicated by the housing condition also suggest their poor economic position as 44 per cent of them were living in fully kutcha houses and another 25.33 per cent were living in partly pucca houses; 80 per cent had only a single room accommodation; 55 per cent of the houses did not have electricity and a similar proportion did not have running water; about 85 per cent had no separate toilet facilities and about 21 per cent had no independent bathroom. Thus, the conditions of workers, working in the handprinting industry are far from satisfactory. The chances of their becoming entrepreneurs are remote. In the present conditions there is hardly any possibility of improvement in their working conditions. Yet a large majority of them prefer to stay in this industry as there is hardly any alternative opportunity of a promising future for them in and around Ahmedabad.